

## Abstract of the invention

It is intended to provide a crosslinked polyrotaxane formed by crosslinking polyrotaxane molecules via chemical bonds which exhibits excellent optical properties in water or in an aqueous solution of sodium chloride; a compound having this crosslinked polyrotaxane; and a process for producing the same. The above object can be achieved by a crosslinked polyrotaxane having at least two polyrotaxane molecules, wherein linear molecules are included in a skewered-like state at the opening of cyclodextrin molecules and blocking groups are provided at both ends of the linear molecules, so as to prevent the cyclodextrin molecules from leaving, and cyclodextrin molecules in at least two polyrotaxane molecules being bonded to each other via chemical bond, characterized in that hydroxyl (-OH) groups in the cyclodextrin molecules are partly substituted with non-ionic groups.